

**REAL TIME HIGH ACCURACY GEOSPATIAL DATABASE  
FOR ONBOARD INTELLIGENT VEHICLE  
APPLICATIONS**

ABSTRACT OF THE DISCLOSURE

5           A geospatial database management system is  
mounted on a host vehicle and manages geospatial data  
relating to a travel path for the host vehicle, the  
travel path having one or more lanes. A geospatial  
database stores data elements indicative of objects  
10 and a location of the objects in three-dimensional  
space. The objects have a lane-level resolution and  
the location is accurate to within an order of one  
decimeter or better. A database manager component is  
configured to maintain the data elements in the  
15 geospatial database and receive database queries from  
a driver assist subsystem configured to assist a  
driver of the host vehicle. A query processor is  
coupled to the database manager component and to the  
geospatial database and is configured to receive the  
20 database query from the database manager component.  
The query processor queries the geospatial database  
and returns query results to the database manager  
component. This can be done in real time.